

Docket No.: AB-122U

00007  
20000  
10/29/4  
~~~~~

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): A multichannel deep brain stimulation system (10) comprising:

an implantable pulse generator (20) having means for generating electrical stimuli comprising a plurality of channels and memory circuits, wherein the memory circuits store at least one program and data;

at least one electrode array (30) connected to said implantable pulse generator, said at least one electrode array having a plurality of electrodes (32);

a rechargeable battery (27) coupled to the implantable pulse generator;

a hand-held programmer (50); and

a clinician's programmer (60);

a manufacturing and diagnostic system (70); and

an external battery charging system (40);

wherein the implantable pulse generator (20) and said at least one electrode array (30) are adapted to be implanted directly in the cranium of a patient; and

wherein the means for generating electrical stimuli comprises control circuits (21, 26, 27) and the memory circuits (22, 24) that cause stimulation pulses having parameters specified only by the at least one program and data stored in the memory circuits to be applied through at least one of the plurality of channels to the electrodes (32) of the at least one electrode array in accordance with the at least one program stored within the memory circuits; and

wherein the hand-held programmer (50) is adapted to: communicate with the implantable pulse generator, allow the patient to monitor and change stimulation parameters, provide a first communication link (46) with the clinician's programmer, and provide a second communication link (47) with the manufacturing and diagnostic system, all for the purpose of programming and testing the implantable pulse generator

Appl. No. 09/936,803  
Amendment B dated October 20, 2004  
Reply to Office Action of July 22, 2004

Page 2 of 10